Proven Performance for Film and Coating Applications

Enhanced Film Solutions with Catalloy Process Resins

The performance requirements and specification standards for film and packaging applications continue to increase, approaching the limits of what can be achieved with current polypropylenes (PP) and polyethylenes (PE). Using propylene based Catalloy Process resins in single and multi-layer film structures can expand the polymer performance envelope for film applications. With Catalloy Process resins, it is possible to take film property performance to a whole new level.

Catalloy Hifax and Adflex resins are alloys of uniformly dispersed synthetic rubber and polypropylene produced in the reactors during polymerization. This proprietary technology enables greater influence on the key properties of the polymer. Hifax and Adflex resins with similar flexural modulus and melt flow rates, can exhibit very different advantages due to the type and amount of synthetic rubber combinations. More detailed discussions with our Catalloy sales and technical team can help to determine how Catalloy resins can be used to enhance your current and new product performance.

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WHY FILM AND EXTRUSION COATING CONVERTORS ARE USING CATALLOY ADFLEX AND HIFAX RESINS

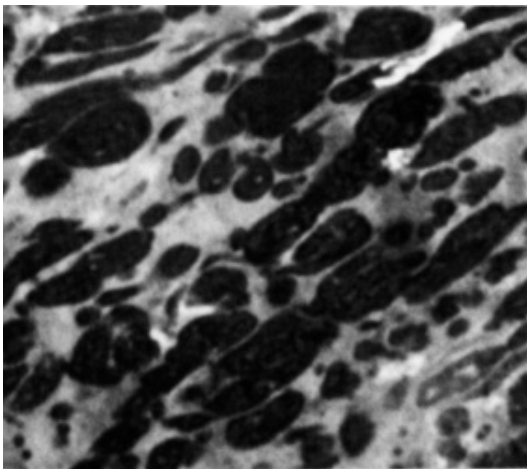
- Catalloy resins are compatible with both PE and PP
  - Catalloy Resins are propylene based film resins and modifiers
    - stiffness, impact, and soft touch
  - Compatible with both PP and PE in blends
  - Co-extrusion integrity to PP and PE containing layers
- Catalloy grades with higher breathability and transmission rates for shelf life extension
- Catalloy resins have both high and low temperature performance
  - Broad working temperature for seasonal, regional and specific application situations
  - Melting points of approx. 140°C (random PP matrix) and 160°C (homopolymer PP matrix)
    - Heat resistance for autoclave and retort applications
  - Grades with excellent low temperature impact and puncture performance
- Flexural Modulus from 20 – 1200 MPa
  - Wide range of stiffness with enhanced impact performance
  - Super Soft low stiffness grades
    - Plasticizer-free
- Catalloy materials are
  - Tough and can exhibit high elastic recovery
  - Heat sealable
  - Thermo-formable
  - Capable of accepting high levels of fillers while retaining functional strength
  - Meet specific food contact requirements
- Soft touch and feel grades
  - Enhanced appearance and feel for consumer applications
  - Low modulus lower noise quieter film grades
  - Lower gloss matte finish grades
- Catalloy resins have the similar density to PP, 0.890 g/cm^3.
  - Material that is consistent with light weighting and a yield advantages

- The processing and handling of Catalloy resins are very comparable to conventional PP
- Engineered to process on conventional extrusion equipment
- Melt Flow Rates from 0.6 – 30 for blown/cast film and extrusion coating applications
- Available in free flowing pellet form delivered in bags, cartons and railcars
- Mixes in and distributes well at the converting extruder

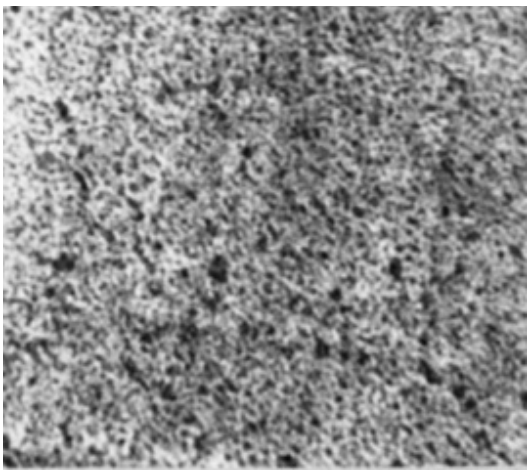
CONSISTENT PROCESSING AND END-USE PROPERTIES THROUGH THE UNIFORM DISPERSION OF AMORPHOUS RUBBER

Pictured below are the transition electron micrographs of Adflex Q100F and a mechanically compounded TPO. Note the uniform dispersion of the amorphous rubber phase (dark areas) in the Adflex Q100F reactor-TPO. This very fine and uniform dispersion results in both more consistent processing and end-use performance, even for ultra-thin parts and profiles.

Mechanical compound grade



***Adflex* Q 100F TPO reactor grade**



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